



LAND USE CONTROL IMPLEMENTATION PLAN



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION KENNEDY SPACE CENTER BREVARD COUNTY, FLORIDA



FACILITY: Ransom Road Landfill
Solid Waste Management Unit No. 3
CONTAMINANTS: VOCs and Ammonia in Groundwater
CONTROL: Prohibit Groundwater and Residential Use

PURPOSE OF LAND USE CONTROL IMPLEMENTATION PLAN

This Land Use Control Implementation Plan (LUCIP) has been prepared to inform current and potential future users of the Ransom Road Landfill of institutional controls that have been implemented at the site¹. Although there are no unacceptable risks to human health or the environment associated with the Ransom Road Landfill, institutional land use controls (LUCs) are necessary to: (i) prohibit the use of groundwater from the site; and (ii) prohibit residential use of the site. Controls will include periodic inspection, condition certification and agency notification.

WHY LAND USE CONTROLS ARE NEEDED

Human health and ecological risk assessments were completed as part of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Chemicals of concern identified for human health risk during the RFI that exceeded Florida Department of Environmental Protection (FDEP) and Environmental Protection Agency (EPA) cleanup target

levels were volatile organic compounds (VOCs) and ammonia in groundwater.

SITE DESCRIPTION

The Ransom Road Landfill is a closed facility that was operated by NASA during the initial construction of facilities at KSC from 1964 through 1970. Landfilling activities included the excavation of trenches that had approximate dimensions of 600' x 30' x 10' deep. The trenches ran east to west in the southern portion of the site. The trenches were unlined, dug to below the water table, and received all waste types during its years of operation. The trenches were then filled with soils that were excavated from the site. The site is approximately 24 acres in size (Figure 2).

SITE LOCATION

The Ransom Road Landfill is located on the south side of Ransom Road, one mile south of the Visitors Center at KSC and approximately one mile west of Kennedy Parkway (Figures 1 and 2). The site is located within Section 12 of Township 23S, Range 36E which is in the Orsino Quadrangle. The groundwater use control area covered by the LUCIP is shown on

1. This LUCIP summarizes institutional controls regarding the NASA KSC Ransom Road Landfill. For detailed information on the site, consult the Ransom Road Landfill administrative file, which is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

Figure 2. Coordinates of the corners of the LUC are provided in **Figure 2** in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains VOCs and ammonia above FDEP's groundwater cleanup target levels. The past, current, and projected future land use of the Ransom Road Landfill is industrial in nature. LUCs are therefore required to prohibit the use of groundwater at this site and prohibit residential use. Indoor air quality shall be evaluated prior to any construction within the groundwater use control area. Methane monitoring shall be conducted prior to any future construction adjacent to the site.

DECISION DOCUMENT

A Statement of Basis (SB) establishes institutional controls as a component of the remedy for the site. The SB for the site, KSC document number KSC-TA- 6495, is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Program Office in accordance with their RCRA permit and a Land Use Control Assurance Plan included

in a Memorandum of Agreement (MOA)² between NASA, FDEP, and EPA, effective February 23, 2001. Upon approval of this LUCIP, it will be incorporated into the permit by reference. Property transfer (if conducted in the future) will be conducted in accordance with Section X of the MOA.

KSC's Environmental Program Office will provide KSC's Master Planning Office with survey coordinates of the LUCs. Restrictions will specify limitations on development and reuse for the area for as long as LUCs are necessary to protect human health and the environment.

MONITORING

Quarterly inspections to monitor that the institutional controls specified herein are in place and operating will be conducted by KSC's Environmental Program Office. The inspection will verify that no residential and groundwater use is occurring.

REPORTING

KSC's Environmental Program Office will submit annual reports to EPA and FDEP certifying retention of the implemented LUCs.

2. By separate MOA effective February 23, 2001, with the EPA and FDEP, KSC, on behalf of NASA, agreed to implement Center-wide, certain periodic site inspections, condition certification, and agency notification procedures designed to ensure the maintenance by Center personnel of any site-specific LUCs deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of that agreement was that through the Center's substantial good faith compliance with the procedures called for herein, reasonable assurances would be provided to EPA and FDEP as to the permanency of those remedies which included the use of specific LUCs.

Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC, EPA and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance with the specific LUC maintenance commitments reflected herein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered and that additional measures may need to be taken to adequately ensure necessary future protection of human health and the environment.

ENFORCEMENT

KSC's Environmental Program Office will be responsible for stopping any activities at KSC that are not compliant with this LUCIP.

MAINTENANCE

The LUCIP shall remain in place until a land use change is implemented and the concerns managed by the LUCIP are mitigated; or there is a discovery, based upon analytical evidence, that scenarios managed by the LUCIP are no longer a concern. Any change in LUC management must be approved by the EPA and FDEP and implemented by modification of NASA's operating permit.

Figure 1. Location of Ransom Road Landfill on Kennedy Space Center, FL.

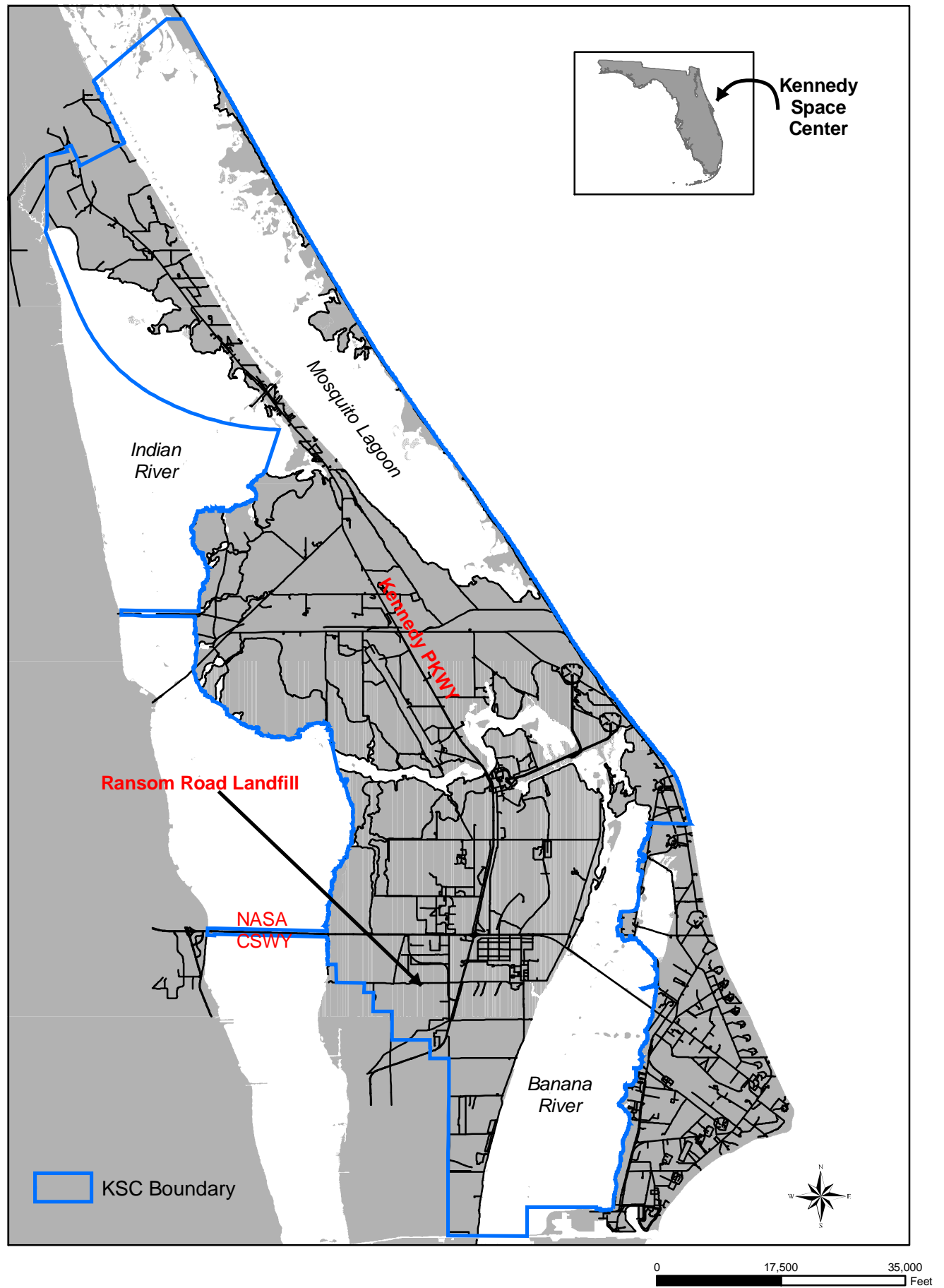


Figure 2. Ransom Road Landfill (SWMU 03) Land Use Control Implementation Plan.

